CALIFORNIA GEOMETRY · UNIT 2 · 25 QUESTIONS

Similarity and Right Triangle Trigonometry — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Two triangles with two pairs of congruent angles are similar by**

- A SAS
- B AA
- C ASA
- D SSS

Understand It with Pulse | Flag a mistake

2 **One triangle has sides 4, 6, and 8. Another has sides 10, 15, and 20. The triangles are similar by**

- A Not similar
- B SSS
- C AA
- D SAS

Understand It with Pulse | Flag a mistake

3 **Two similar triangles have corresponding sides 3 and 12. Another side of the smaller triangle is 7. The corresponding side is**

- A 21
- B 4
- C 10
- D 28

Understand It with Pulse | Flag a mistake

4 **Two similar figures have linear scale factor 2:5. The smaller figure has perimeter 30. The larger perimeter is**

- A 75
- B 12
- C 60
- D 150

Understand It with Pulse | Flag a mistake

5 **Two similar figures have linear scale factor 1:3. The smaller figure has area 20. The larger area is**

- A 180
- B 60
- C 40
- D 120

Understand It with Pulse | Flag a mistake

6 **In a triangle a midsegment is parallel to a base of length 34. The midsegment length is**

- A 17
- B 8
- C 68
- D 34

Understand It with Pulse | Flag a mistake

7 **A line parallel to one side of a triangle divides one side into segments 4 and 12, and another side into segments 5 and x. The value of x is**

- A 20
- B 9
- C 8
- D 15

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8 **A right triangle has legs 9 and 12. The hypotenuse is**

- A 10
- B 21
- C 15
- D 18

Understand It with Pulse | Flag a mistake

9 **A right triangle has hypotenuse 26 and one leg 10. The other leg is**

- A 16
- B 14
- C 24
- D 36

Understand It with Pulse | Flag a mistake

10 A right triangle has legs 8 and 15. The hypotenuse is

- **A** 17
- **B** 7
- **C** 19
- **D** 23

Understand It with Pulse | Flag a mistake

11 In a right triangle the side opposite an acute angle is 8 and the hypotenuse is 17. The sine of the angle is

- **A** $\frac{8}{15}$
- **B** $\frac{17}{8}$
- **C** $\frac{15}{17}$
- **D** $\frac{8}{17}$

Understand It with Pulse | Flag a mistake

12 In a right triangle the adjacent side is 12 and the hypotenuse is 13. The cosine of the angle is

- **A** $\frac{12}{13}$
- **B** $\frac{12}{5}$
- **C** $\frac{13}{12}$
- **D** $\frac{5}{13}$

Understand It with Pulse | Flag a mistake

13 In a right triangle the opposite side is 7 and the adjacent side is 24. The tangent of the angle is

- **A** $\frac{7}{25}$
- **B** $\frac{7}{24}$
- **C** $\frac{24}{7}$
- **D** $\frac{24}{25}$

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14 **In a 45 45 90 triangle a leg is 6. The hypotenuse is**

- A 12
- B $6\sqrt{3}$
- C 6
- D $6\sqrt{2}$

Understand It with Pulse | Flag a mistake

15 **In a 30 60 90 triangle the hypotenuse is 20. The shortest side is**

- A 20
- B $10\sqrt{3}$
- C 10
- D 40

Understand It with Pulse | Flag a mistake

16 In a 30 60 90 triangle the shortest side is 5. The longer leg is

- A $5\sqrt{2}$
- B $5\sqrt{3}$
- C 10
- D 15

Understand It with Pulse | Flag a mistake

17 If sin x = cos x and x is acute, then x is

- A 90°
- B 60°
- C 30°
- D 45°

Understand It with Pulse | Flag a mistake

18 One acute angle of a right triangle measures 39°. The other acute angle measures

- A 90°
- B 39°
- C 51°
- D 141°

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19 A ladder 25 long leans against a wall with its foot 7 from the wall. It reaches a height of

- A 16
- B 32
- C 24
- D 18

Understand It with Pulse | Flag a mistake

20 **A tower 30 tall is seen at an angle of elevation of 45°. The horizontal distance to the tower is**

- A 15
- B $30\sqrt{2}$
- C 30
- D 60

Understand It with Pulse | Flag a mistake

21 **The geometric mean of 4 and 9 is**

- A 36
- B 13
- C 4
- D 6

Understand It with Pulse | Flag a mistake

22 In a right triangle the altitude to the hypotenuse divides it into segments 4 and 9. The altitude length is

- **A** 13
- **B** 6
- **C** 36
- **D** 5

Understand It with Pulse | Flag a mistake

23 Two similar triangles have areas 25 and 100. A side of the smaller is 9. The corresponding side is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

24 A right triangle has legs 20 and 21. The hypotenuse is ____

ANSWER _____

Understand It with Pulse | Flag a mistake

25 If $\tan x = \frac{1}{\sqrt{3}}$ and x is acute, then x is ____

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. B
3. D
4. A
5. A
6. A
7. D
8. C
9. C
10. A
11. D
12. A
13. B
14. D
15. C
16. B
17. D
18. C
19. C
20. C
21. D
22. B
23. 18
24. 29
25. 30

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